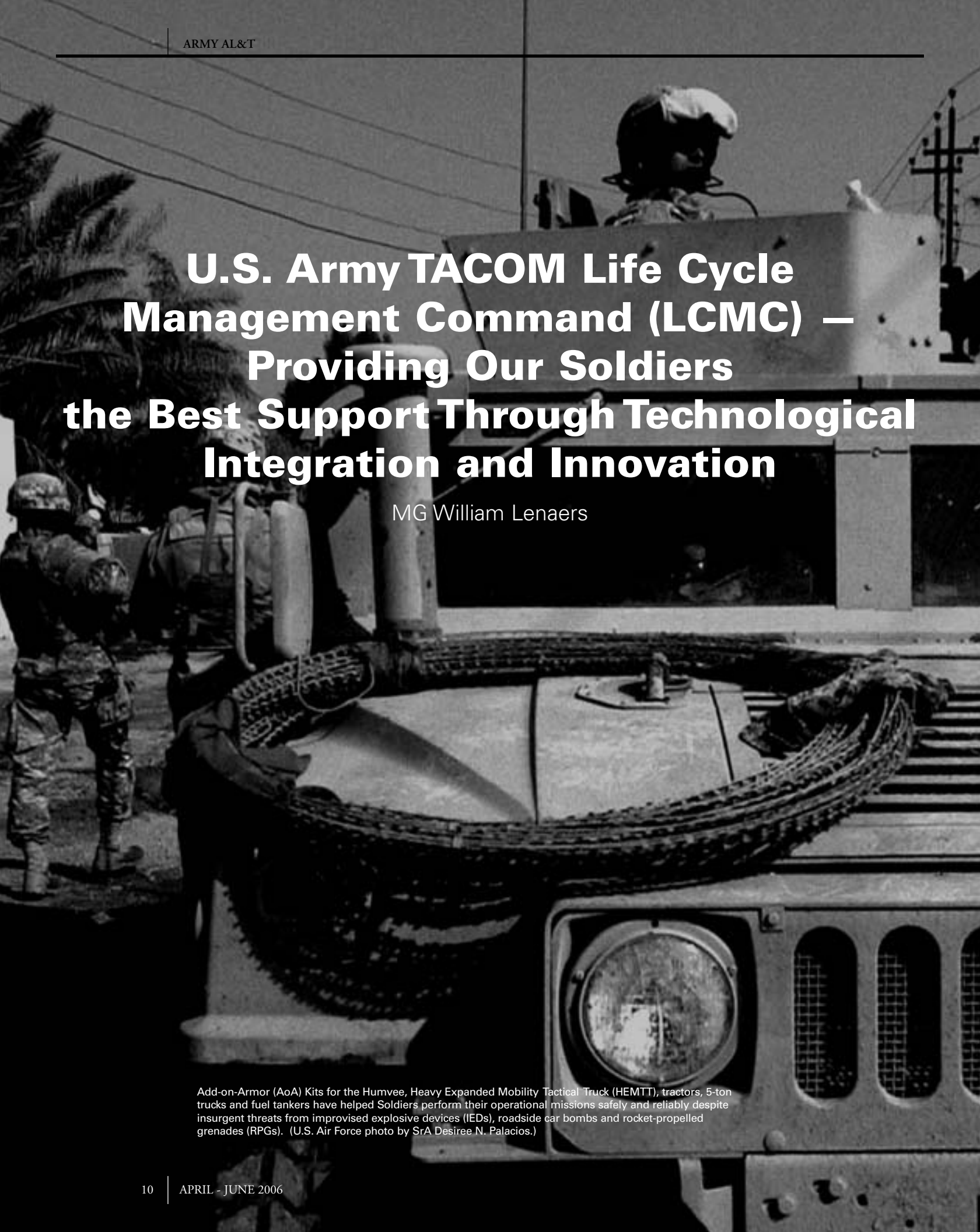
U.S. Army TACOM Life Cycle Management Command (LCMC) — Providing Our Soldiers the Best Support Through Technological Integration and Innovation

MG William Lenaers



Add-on-Armor (AoA) Kits for the Humvee, Heavy Expanded Mobility Tactical Truck (HEMTT), tractors, 5-ton trucks and fuel tankers have helped Soldiers perform their operational missions safely and reliably despite insurgent threats from improvised explosive devices (IEDs), roadside car bombs and rocket-propelled grenades (RPGs). (U.S. Air Force photo by SrA Desiree N. Palacios.)

Established in August 2004, the TACOM LCMC unites every organization that focuses on Soldier and ground systems. By aligning our efforts on managing systems throughout their life cycles, the TACOM LCMC can deliver improved warfighting capabilities — quality, reliability, performance and readiness. Accordingly, the TACOM LCMC has a single focused objective — support our Soldiers fighting the global war on terrorism (GWOT). This means that the LCMC gets products to the warfighter faster, increases the quality and performance of those products, minimizes life-cycle costs and enhances the effectiveness and integration of our acquisition, logistics and technology (AL&T) communities.

Our transformation as an LCMC must be linked to our efforts toward transforming Soldier and ground systems. Doing so provides the Army with more flexible and versatile combat capability within a more adaptive and responsive management structure. The entire LCMC is fully engaged in all areas of Army transformation, from "Resetting" — repairing, rebuilding and overhauling — a wide range of Army Soldier and ground systems returning from Iraq and Afghanistan, to planning for the capability needs of the Current and Future Forces.

Structure

Transforming an Army at war requires a shift in the paradigm of a "business as usual" approach to reorganizing the command. Program Executive Office (PEO) Ground Combat Systems (GCS), PEO Combat Service and Combat Service Support (CS&CSS), PEO Soldier, Integrated Logistics Support Center (ILSC) and the TACOM Acquisition Center have taken a process approach to our LCMC implementation and are now operating as a single organization instead of five separate entities as depicted in Figure 1. In lieu of rushing to draw a new wiring diagram for the LCMC, we are using Lean/Six Sigma (LSS) methodology to create LCMC processes. A key outcome of this approach has been improvement in communication across the LCMC. This, in turn, has fostered a cultural change that recognizes collaboration across the life cycle with integrated processes that have made us more agile and effective in responding to our mission.

The TACOM LCMC enterprise also includes three of the U.S. Army Research, Development and Engineering Command (RDECOM) centers: the U.S. Army Tank Automotive Research, Development and Engineering Center (TARDEC); U.S. Army Armament Research, Development and Engineering Center (ARDEC); and the Natick Soldier Center. While retaining their strategic and organizational links to RDECOM, this corporate linkage to the LCMC and our program/project managers (PMs) allows us to rapidly address improvements to fielded systems and also improves the linkages for future acquisitions. Because the TACOM LCMC is founded on effective integration of AL&T processes and procedures, the institutionalization of LSS fact-based decision making and continuous measurable improvements is possible. We are using LSS every day to fight bureaucracy, be more agile and work faster, smarter and more effectively.

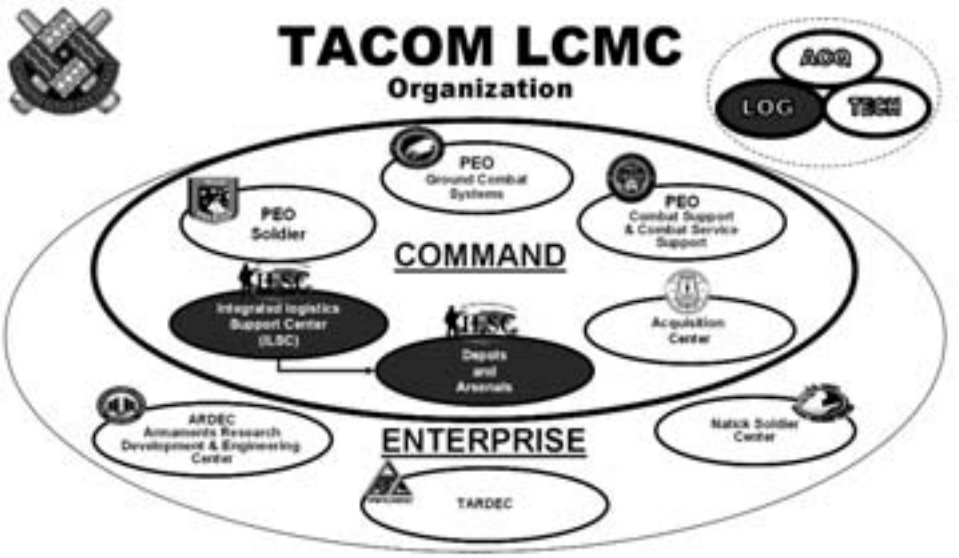


Figure 1. The TACOM LCMC integrates Army AL&T responsibilities, authorities and processes to provide the best possible support to warfighters and one voice to the customer.

The TACOM LCMC is designed to ensure that each organization throughout the life cycle is involved in the planning of all life-cycle phases as illustrated by Figure 2. The effective and efficient accomplishment of our shared missions requires significant internal and external integration. Our future direction is based on process identification, process ownership and greater effectiveness and efficiency to benefit the entire TACOM LCMC community. More importantly, by speaking with one voice, we aim to provide the best possible support to our warfighters.

Warfighter Support

The TACOM LCMC's greatest impact has been supporting our Soldiers in *Operations Enduring* and *Iraqi Freedom* (*OIF*). Because of the LCMC's monumental efforts and the tremendous support from our industrial base, today's warfighters are better equipped against constant threats of insurgent attacks. Tanks and armored personnel carriers were the vehicles of choice during initial operations in Iraq, and those performed exceptionally well. Because of the nature of peacekeeping and coalition-building missions, the mission has now been modified, and much of the day-to-day business of nation building is accomplished with support vehicles. The Army employs, and the LCMC supports, thousands of trucks, engineering vehicles and combat vehicles doing everything from moving ammunition, food, water and fuel across vast distances, to providing a platform for security patrols protecting Iraqi citizens.

Insurgents target TACOM-managed vehicles and Soldiers by using IEDs, roadside car bombs, RPGs and ambushes to disrupt U.S. forces from conducting their missions. The combatant commanders requested support to develop materiel solutions to counter these threats and we responded by developing vehicle AoA Kits for the Humvee, HEMTT, M915 series tractor, M939 series 5-ton truck and M969 fuel tanker. Tremendous effort has also been placed on post-blast safety enhancements to these systems to protect our Soldiers.

LCMC PMs, in cooperation with the Army Research Lab and TARDEC, quickly designed AoA Kits. The plans for the kits were passed along to both civilian industry and the TACOM LCMC's organic manufacturing base. The true might and flexibility of the industrial base has been demonstrated by many of these orders coming in well ahead of schedule to ensure the fastest response for our Soldiers' vehicles and weapons platforms.

We have also upgraded personnel armor in numerous areas as the insurgents adjusted to our existing body armor. Deltoid Auxiliary Protection, side plates and enhanced body armor are just a few examples of how the LCMCs and their PMs are continuously improving Soldier protection.

During 2006, a key TACOM LCMC initiative is the Tank and Bradley Urban Survivability Kits Active Protection System. Here, an M1A2 Abrams main battle tank provides overwatch during a search and cordon operation in Biaj, Iraq. (U.S. Army photo by SSG Aaron Allmon II.)

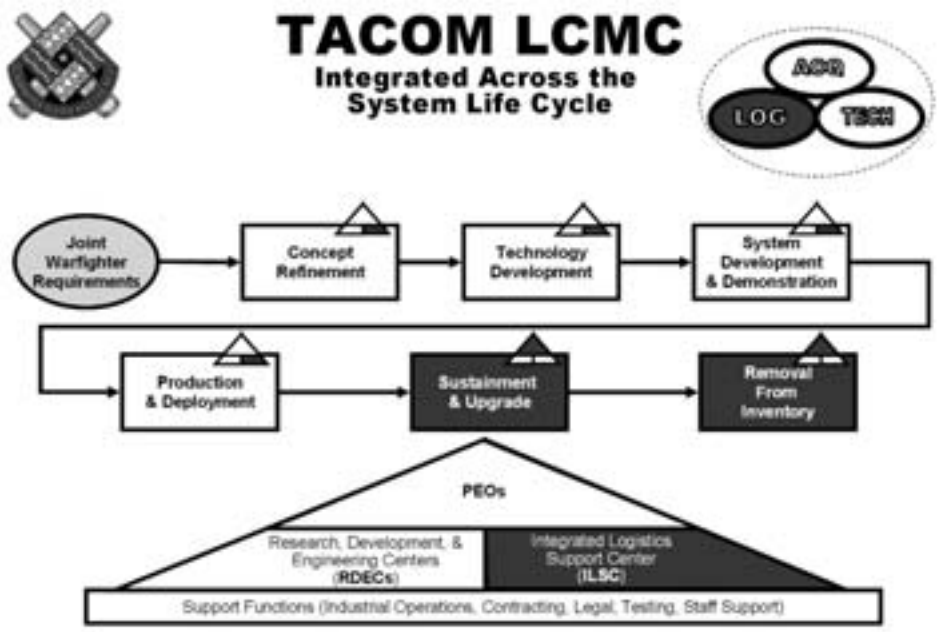


Figure 2. The objective is to get products to the warfighter faster, make our good products even better, minimize life-cycle costs and enhance the effectiveness and integration of our AL&T communities.

The TACOM LCMC has more than 750 personnel on the ground in theater that we put under the command and control of another Army Materiel Command (AMC) organization — the Army Field Support Command (AFSC). AFSC serves as a direct conduit to different LCMC organizations to enable quick response and assessment of any need that warfighters may have — both deployed and at home station. The TACOM LCMC's ability to respond rapidly to urgent requirements is a direct result of its industrial capacity and employment of its core competencies in both skills and technology. As a result, the LCMC has demonstrated its ability to support and protect our warfighters under all conditions.

LCMC AL&T Integration

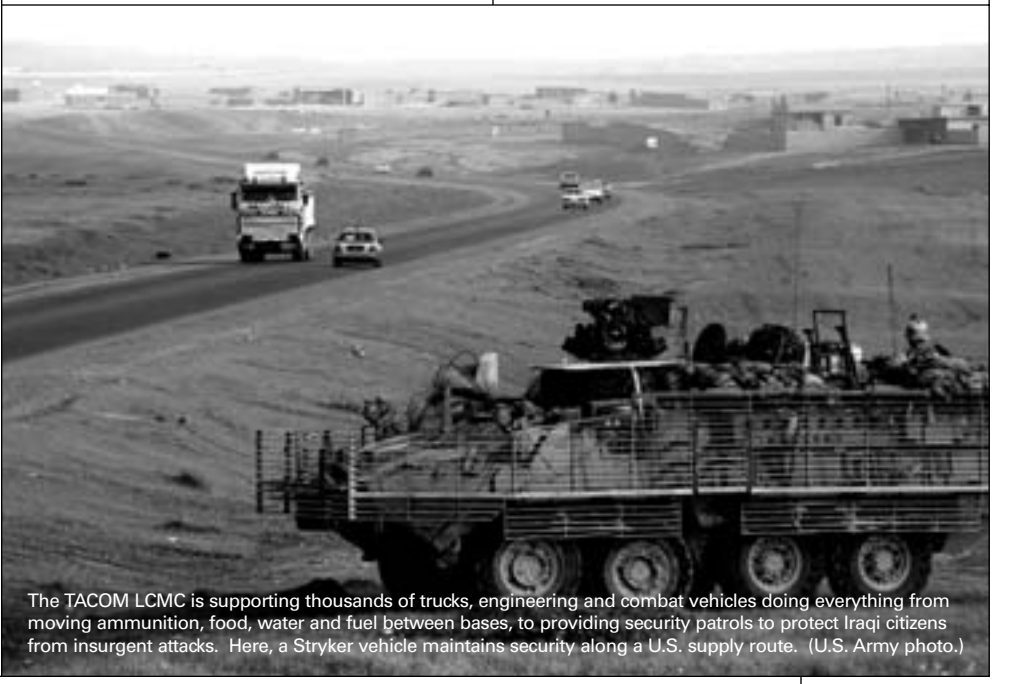
One year into the implementation of our LCMC concept, we're pleased with the initial results and continue to work hard as we generate improvements across our scope of operations. The TACOM LCMC is beginning to show measurable results — specifically in the areas of technology transfer, materiel management and common practices. This brings a much-needed balance to the way we do business and is breaking down cultural and functional barriers across the community.

To strategically manage the integration and improvement of AL&T throughout our community, we created the TACOM LCMC Executive Steering Committee, which is composed of LCMC senior leaders. Senior leader commitment, both within the TACOM LCMC and from AMC and the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASAALT), makes the TACOM LCMC work.

As a direct result of the close collaboration achieved through the LCMC concept, many complex AL&T integration issues have been addressed. Among those are:

- Tactical Wheeled Vehicle (TWV) Strategy.
- GCS Strategy.
- Small Arms Campaign Plan.
- Numerous mission-related improvements to our Humvee Repower, Bradley transmission, AoA, up-armored vehicles and Total InteGrated Engine Revitalization engine programs.

LSS process methodologies have been successfully used within the TACOM LCMC Acquisition Center to review and improve current processes or to



The TACOM LCMC is supporting thousands of trucks, engineering and combat vehicles doing everything from moving ammunition, food, water and fuel between bases, to providing security patrols to protect Iraqi citizens from insurgent attacks. Here, a Stryker vehicle maintains security along a U.S. supply route. (U.S. Army photo.)

This 24-ton Buffalo vehicle offers combat engineers a safe, effective means of searching for IEDs by using its 30-foot remote-controlled hydraulic arm to prod suspicious items found along roadways and main supply routes. Innovations such as this are saving Soldiers' lives and thwarting the insurgency's best efforts. (U.S. Army photo by MSG Lek Mateo.)

develop processes to implement new requirements in conjunction with our command and enterprise partners. Value stream analysis (VSA) sessions are an ideal forum for LCMC partners to map out business processes with an eye toward more efficient operations. The TACOM Acquisition Center has hosted and facilitated LSS VSAs with a number of its LCMC customers, including:

- ILSC, PEO CS&CSS, PEO GCS and TARDEC to develop processes and templates to implement the Army policy for the use of non-DOD contractual instruments.
- PEO CS&CSS to improve the timeliness and quality of our contracting support under a multiple award task order contract.
- ILSC to update the government-furnished property/government-furnished equipment process and procedures.
- ILSC, PEO CS&CSS, PEO GCS, Small Business Office, Procurement Law Office and TARDEC to develop a set of "guiding principles" to ensure early participation of all LCMC partners in the procurement package development process.
- ILSC to improve current processes for tracking long-term contracts so that new indefinite delivery indefinite quantity contracts are in place before current contracts expire.

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Communication

Critical to our process is continuous communication. We routinely share lessons learned, best business practices and integration successes at conferences, seminars and symposia. The first Joint AMC/ASAALT Acquisition Senior Leaders Conference, held in August 2005, was an excellent forum that helped foster communication between our AL&T communities. LCMC commanders and PEOs shared improvement suggestions, examples of effective integration and LSS successes.

TARDEC also shares lessons learned through a wide range of management interactions. They hold frequent face-to-face management meetings, quarterly technical reviews with each PEO, process reviews for TARDEC reimbursement to support each PEO and process reviews to receive support through the ILSC.

Within the contracting community, there are regular opportunities to share initiatives, best practices and management approaches at AMC Principal Assistant Responsible for Contracting (PARC) conferences. At these conferences, various contracting and acquisition initiatives are shared and fostered by ASAALT. DOD procurement conferences provide similar opportunities.

The entire LCMC has increased our focus on sharing information with our private industry partners concerning their systems' performance. When there is an issue, I will personally call the company president to get leadership involvement. We are now working to harvest and share the digital health and diagnostic data that electronically control components so the original equipment manufacturers can help us improve their systems and speed the process to achieve condition-based maintenance.

Path Forward

The concept for this LCMC is a new one, and like any organization that is undergoing change, there are areas to improve, concepts to clarify and processes and practices that need review, evaluation and implementation. This is less about organizational change than it is about a commitment to use LSS principles to make fact-based decisions and to continuously improve our processes and structure.

Every day we must become faster, more agile and less bureaucratic as we

An M2A3 Bradley Fighting Vehicle (BFV) outfitted with Reactive Armor Tiles patrols the streets of Tal Afar, Iraq, during a routine security patrol. The venerable BFV has proven to be a versatile "street fighter," but Urban Survivability Kits/Active Protection Systems are under development by the TACOM LCMC team to make the BFV even more survivable against any foe. (U.S. Navy photo by PH1 Alan D. Monyelle.)

continue to move forward with Army transformation, modularity and support to our Soldiers fighting the GWOT. The products and services for our Soldiers evolve as we continue the cycle of research and development, production, testing, fielding and sustainment to provide those in harm's way with the best possible equipment. Some of our initiatives for the coming year are:

- The Natick Soldier Center's Future Force Warrior (FFW) Advanced Technology Demonstration (ATD) is the Army's flagship science and technology program that will transition mature technologies to the Ground Soldier System acquisition program, led by PEO Soldier and PM Soldier Warrior. By the end of the ATD (FY07), we hope to successfully demonstrate that FFW technologies will contribute to system development and demonstration of the Ground Soldier Threshold System, which in turn will address Future Force operational requirements for dismounted Soldiers, including those within the Future Combat Systems (FCS) Brigade Combat Team.
- TARDEC continues its research and development of future technologies with efforts in FCS survivability, FCS robotics platforms, the Future Tactical Truck System (FTTS), a hybrid-electric drive for FCS and crew station technology for FCS.
- Continue fielding the Tank and Bradley Urban Survivability Kits Active Protection System, Common Remotely Operated Weapon Station, Individual Body Armor and safety enhancements for our tactical vehicles.
- Design, develop and test Long-Term Armor Strategy solutions for the TWV fleet.
- Continue Reset and modularity programs.
- Complete endeavors in FTTS Advanced Concept Technology Demonstration, Forward Repair System evolution and Expedited Modernization Initiative Procedure execution.

As the LCMC continues internal process improvements, we do so listening to the feedback from our Soldiers. We have made great progress in providing our products to the warfighter — giving them what they need, when and where they need it, and then making it better. That is our way ahead. It is a team effort that must include every TACOM LCMC member.

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